March 25, 1952 W. E. SANNER ET AL 2,590,352

DITCH DIGGER

Filed Sept. 27, 1949 2 SHEETS—SHEET 1

Fig. 1.

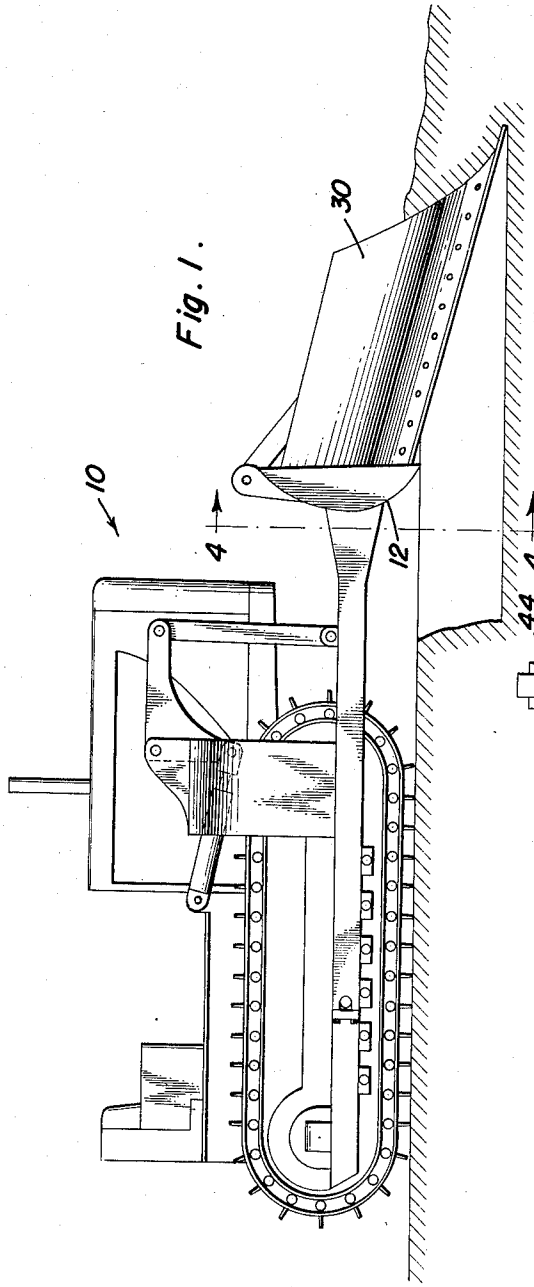
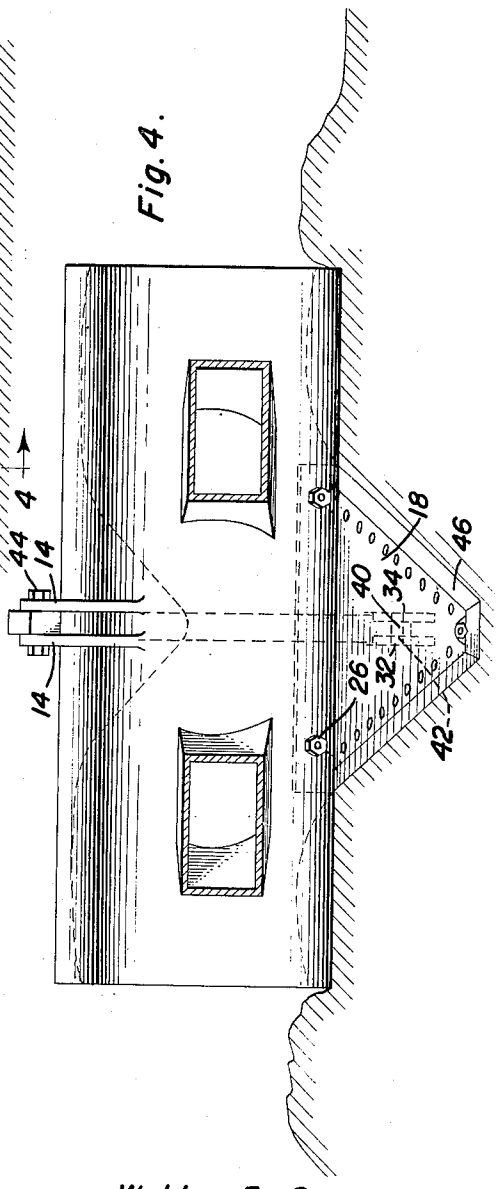


Fig. 4.



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2 SHEETS—SHEET 2

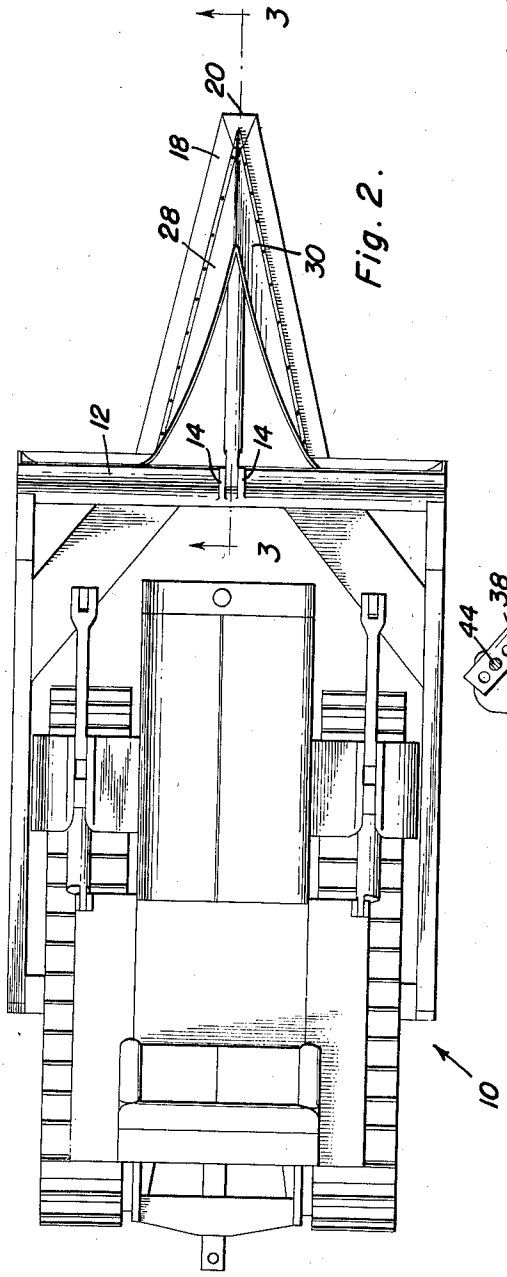

Fig. 2.

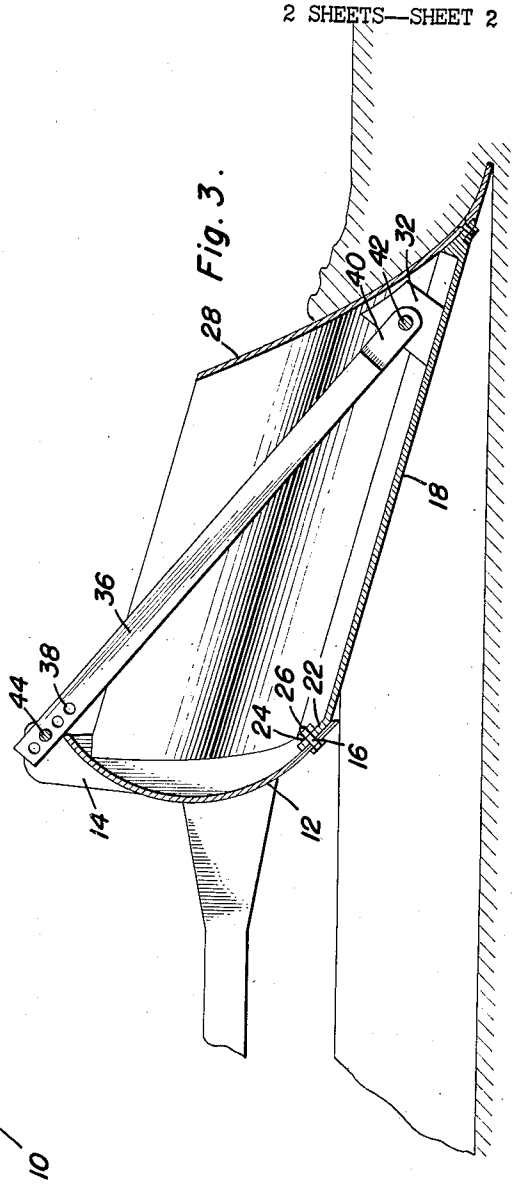

Fig. 3.

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UNITED STATES PATENT OFFICE

2,590,352

DITCH DIGGER

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Application September 27, 1949, Serial No. 118,014

2 Claims. (Cl. 37—98)

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This invention relates to an attachment for a bulldozer which is especially designed for excavating or digging trenches or ditches. An object of the invention is to provide a simple and economical structure for attachment to a bulldozer in which the several parts will be arranged in a novel and useful manner, producing an apparatus which will excavate trenches or ditches in a highly satisfactory manner.

Another object of the invention is to provide a bulldozer attachment with novel means for adjusting the cutting edges in relationship with the work to be done.

These, together with the various ancillary objects of the invention, which will later become apparent as the following description proceeds, are attained by this ditch digger, a preferred embodiment of which has been illustrated in the accompanying drawings, wherein:

Figure 1 is a side elevational view showing the ditch digger comprising the present invention in operative attachment to a bulldozer;

Figure 2 is a top plan view of the combination of Figure 1;

Figure 3 is a vertical sectional view as taken along line 2—2, and being enlarged scale so as to show more clearly the various elements of the ditch digger; and,

Figure 4 is a vertical sectional view as taken along line 4—4 in Figure 1.

With continued reference to the accompanying drawings, wherein like reference numerals designate similar parts throughout the various views, reference numeral 10 is used to designate a bulldozer on which the ditch digger comprising the present invention is secured. Secured to the blade 12 of the bulldozer are a pair of centrally disposed parallel flanges 14 having apertures therethrough for a purpose to be hereinafter disclosed. The blade 12 of the bulldozer is also provided with a pair of apertures 16 in the lower ends thereof.

Referring now more particularly to Figures 3 and 4, the ditch digger comprising the invention includes a base plate 18 of substantially triangular shape with the cutting surface disposed away from the bulldozer blade 12. An upwardly angularly divergent flange 22 is formed integral with the base 18 and has a pair of aligning apertures 24 therethrough in alignment with the aperture 16 in the bulldozer blade 12. A suitable nut and bolt 26 is used to secure the base plate 18 to the blade 12.

A pair of side members 28 and 30 are secured inwardly of the rearwardly angularly divergent

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edges of the base plate, thus leaving a substantial peripheral margin therearound. The side members 28 and 30 are angularly convergent upwardly of the base plate 18. A detachable cutter blade 20 is connected to the forward ends of the side members 28 and 30.

A pair of parallel braces 32 and 34 have their opposed ends secured to the upper surface of the base plate, and to the lower surface of the side members 28 and 30 respectively. These braces are provided with a central aperture therethrough.

A rigid strong connecting bar 36 is provided which has a plurality of apertures 38 at one end. The other end of the bar 36 is provided with a portion reduced in area and designated by reference numeral 40. This portion 40 of reduced area is fitted between the braces 32 and 34 and is provided with an aperture in alignment with the aperture in the braces. A suitable pin or other securing means 42 is used to pivotally secure the bar 36 to the braces. The portion of the bar containing the plurality of apertures 38 is then positioned between the flanges 14, one of the apertures 38 being in selective alignment with the apertures in the flanges. An easily removable bolt and nut assembly 44 is used to selectively secure the bar 36 to the flanges. Another aperture, not shown, may be provided in the bar 36 for alignment between the flanges 14 so that the base 18 may be raised to a substantially horizontal position. It is to be seen that the selective positioning of one of the apertures 38 in alignment with the aperture in the flanges 14 will vary the cutting angle of the cutting edges 46 of the ditch digger, which are shown bolted to the base plate 18.

Since from the foregoing, the construction and advantages of this ditch digger are readily apparent, further description is believed to be unnecessary.

This ditch digger may be built in many varying sizes, depending upon the size of the ditch to be dug, and the size of the bulldozer to which the ditch digger is to be attached. Additionally, since numerous modifications and equivalents will readily occur to one skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not intended to limit the invention to the precise embodiment shown and described, except as required by the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A ditch digger comprising a bulldozer blade,

a base plate of substantially triangular shape having its rear edge portion secured to the lower edge of the blade, a pair of side members secured at their lower edges to said base plate and adjacent the rearwardly angular divergent edges of said base plate, said side members being convergent upwardly and divergent rearwardly, said base plate being inclined downwardly from the blade.

2. A ditch digger comprising a bulldozer blade, a base plate of substantially triangular shape having its rear edge portion secured to the lower edge of the blade, a pair of side members secured at their lower edges to said base plate and inwardly of the rearwardly divergent edges of said base plate, said side members being convergent upwardly and divergent rearwardly, said base plate being inclined downwardly from its blade, a flange on an upper central portion of said

blade, another flange on a forward portion of said base plate, and an inflexible bar adjustably secured to one of said flanges and pivoted on the other of said flanges.

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